REMARKS

Claims 1-6 are currently pending, and claim 1 has been amended. Reexamination and reconsideration of the present application is respectfully requested.

At the outset, the Examiner is thanked for the thorough review and consideration of the present application. The Examiner's Office Action dated September 22, 2003 has been received and the contents carefully noted.

In the Office Action, the Examiner rejected claims 1-6 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Kadoi et al. (US Patent No. 5,625,002). This rejection is respectfully traversed.

Claim 1, as amended, is allowable, at least for the reason that claim 1 recites a combination of features, including,

> "A fuel system part ~~consisting of a resin composition~~, comprising: a mold formed from an injection molded resin composition, wherein ...a melting flow rate of a polyphenylene sulfide resin is about 100 to 300 g/10 min." [emphasis added]

None of the cited references teaches or suggests each and every element of the claims. None of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention.

The resin composition of the present invention is used in a fuel system part and has a specific blend rate of components, has a fuel permeability coefficient in a specific range, and includes a PPS resin that has a melting flow rate in a specific range. As discussed at least on page 17 of the specification of this application, providing a fuel system part as claimed in claim 1 provides a material with excellent fuel permeation resistance and shock impact resistance. The specific fuel permeability coefficient can be

achieved by using the specific blend rate of a resin composition including a PPS resin having a specific melting flow rate and an olefin based resin recited in claim 1.

A test specimen was prepared by injection molding, and the degree of tensile elongation at break, Izod impact strength, flexural modulus at 80 °C, oil resistance, and fuel permeability coefficient were evaluated.

A low viscosity resin composition is achieved because it includes the PPS resin having a melting flow rate from about 100 to 300 g/10 min. With this melting flow rate, the reactivity with the olefin based resin is improved and the olefin based resin is well-decentralized in the resin composition. As a result, shock impact resistance is improved. Such a low viscosity resin composition is suitable for injection molding. Therefore, modularizing is easier.

Conversely, when the total quantity of olefin based (co)polymer exceeds 60 parts by weight or the blend rate of olefin based (co)polymer having functional group exceeds 10 to 40% of the total quantity of olefin based (co)polymer, a fuel system part having inferior properties is obtained. Specifically, the fuel permeation resistance, heat resistance, heat stability, chemical resistance, and oil resistance which are inherent to the PPS resin itself are degraded, and the viscosity during fusion kneading increases, and a tendency that injection molding properties are degraded occurs in the case where the olefin based resin exceeds 100 parts by weight, which is not preferable.

Thus, improved flexibility and excellent oil resistance may be obtained for a fuel system part by using the claimed total quantity of olefin based resin.

Kadoi et al. discloses a resin composition comprising a polyphenylene sulfide (PPS), an epoxy group-containing olefin polymer, and at least one elastomer. Although

in some examples, the PPS component and the elastomer component of the resin composition in Kadoi et al. overlap the range of the PPS and the olefin based (co)polymer as recited in claim 1 of the present application, there is no teaching that there is an effect on a fuel permeability coefficient or a melting flow rate in the various examples for a fuel system part.

In Kadoi et al. an amount of the polyphenylene sulfide resin and the olefin based resin are 55 to 99 % by weight and 0.1 to 30 % by weight, respectively, and the remainder of the composition includes an elastomer. *See* column 5, lines 24-33 and column 6, line 62 to column 7, line 5. Also, in column 7, lines 44-59, the PPS composition can be extrusion-molded into a tubular article, a sheet-form article and other shaped articles because such a high viscosity type PPS is used. Further, in column 8, lines 25-39, PPS having a melt viscosity of about 2,500 poise is obtained. (A melt viscosity of 2,500 poise is equivalent to a melting flow rate of about 50g/10 min.).

The Examiner alleges that the product in the reference is substantially the same as the claimed product and that the product "inherently" has the claimed properties regarding impact strength, flexibility, and gas barrier, or that it would have been obvious to prepare a fuel system part from blends of polyphenylene sulfide and olefin copolymer having the required properties including the fuel permeability coefficient. However, the caselaw upon which the Examiner relies, stands for the proposition that "The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable." *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Applicants respectfully submit that the claims of the present application are patentable because the fuel permeability coefficient, melting flow rate, tensile elongation, and Izod impact strength are not inherently present in a resin composition having similar components. Further, because the fuel system part is made by injection molding a resin composition including a low viscosity PPS, a fuel system part having a large size and complicated form can be obtained.

The blend rate of the epoxy group-containing olefin copolymer (corresponding to (b1) in claim 1 of the present application) is 50% by weight and the rate of elastomer (corresponding to (b2) in claim 1 of the present application) is 50% by weight, respectively in Example 19 of Kadoi et al. which is beyond the blend rate of the present application. Also, the total quantity of olefin based (co)polymer in Example 7 and the blend rate of (b1) and (b2) in Example 5 of Kadoi et al. exceed the ranges in claim 1. These ranges result in a fuel system part having inferior properties as discussed above. The reference is silent with respect to a fuel permeability coefficient and the melting flow rate is outside the range of the claimed melting rate recited in claim 1.

Applicants respectfully submit that the properties of the resin composition in the present application differ from that of Kadoi et al. to such an extent that unexpected results have been obtained (as shown in the examples in the present application) and a marked improvement in the flexibility and oil resistance of a fuel system part has been achieved.

It can thus be understood that the Kadoi et al. disclosure does not in any way anticipate nor make obvious, the essential features of the present invention as set out in independent claim 1.

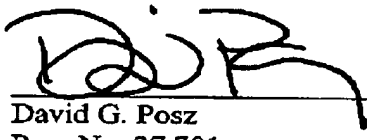
Therefore, as the cited reference fails to anticipate the present invention as recited in independent claim 1, Applicants respectfully request that the rejection under 35 USC 102(b) be withdrawn.

In addition, as the reference fails to render the present invention as recited in independent claim 1, obvious, Applicants respectfully requests that the rejection of these claims under 35 USC 103(a) be withdrawn.

Moreover, as claims 2-6 each depend from independent claim 1, each of these claims is also allowable for the same reasons as their respective base claims.

In view of the above remarks, the present application is believed to be in condition for allowance. A prompt notice to that effect is respectfully requested. Although no additional fees are believed to be due, permission is hereby given to charge any unforeseen fees to deposit account 50-1147.

Respectfully submitted,



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